

Appl. No. : 10/799,337
Filed : March 12, 2004

REMARKS

The following remarks are responsive to the March 24, 2006 Office Action.

Claims

Claims 1-20 were pending prior to the entry of the amendments herein. Claims 1, 2, and 4 have been amended to recite that the intensity of the UV light is between about 16 and 20 minimum erythema doses (MED) and that the diseased skin is cooled to below about 0 °C. New Claim 21 has been added. Applicants submit that these amendments are fully supported by the application as filed. For example, see ¶¶ [0036] & [0114]-[0117] of the present application. Claim 19 has been canceled without prejudice. Claims 1-18, 20 and 21 are therefore presented for further consideration.

Rejection of Claims 1-4 under 35 U.S.C. § 103(a)

Claims 1-4 are rejected under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 6,083,218 to Chou in view of U.S. Patent No. 5,979,454 to Anvari et al. Applicants respectfully traverse these rejections because Chou, either alone or in view of Anvari, fails to teach or suggest, either expressly or inherently, the elements of the claims.

Chou does not teach or suggest an apparatus or method for applying a source of UV light including an intensity between about 16 and 20 MED or a cooler for cooling the diseased skin to below about 0 °C. Anvari also does not teach or suggest an apparatus or method for applying a source of UV light including an intensity between about 16 and 20 MED or a cooler for cooling the diseased skin to below about 0 °C. In particular, Claim 1 recites an apparatus comprising “a source of UV light including an intensity between about 16 and 20 minimum erythema doses (MED)” and “a cooler for cooling the diseased skin to below about 0 °C;” Claim 2 recites an apparatus comprising “a source of high intensity ultraviolet light between about 16 and 20 minimum erythema doses (MED)” and “a cooler included in said delivery device configured to cool the skin to lower than about 0 °C;” and Claim 4 recites a method comprising “cooling the diseased tissue to below about 0 °C and exposing the diseased tissue in said epidermal region to a dosage of ultraviolet light between about 16 and 20 minimum erythema doses (MED).” Therefore, Chou, alone or in combination with Anvari, does not teach or suggest the elements of Claims 1, 2, and 4.

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Claim 3 depends from Claim 2 and includes the features recited in Claim 2 in combination with other features of particular utility. Chou and Anvari therefore fail to teach or suggest the combination of features recited in Claim 3. Therefore, Chou, alone or in combination with Anvari, does not teach or suggest the elements of Claims 1-4. Accordingly, Applicant respectfully submits that Claims 1-4 are patentably distinct from Chou and Anvari.

Additionally, there is no motivation or suggestion to combine Chou and Anvari. Chou discloses tissue treatment with a temperature rise of less than 1 °C. Chou at col. 5, ll. 49-57. Chou's preferred embodiment is the application of water cooled to a temperature in the range of 15 °C to 30 °C to a tooth. Chou at col. 4, ll. 14-17. Chou does not report problems related to cooling that would cause one of skill in the art to look to another reference, such as Anvari, to solve such problems. Thus, based on the teaching of Chou, one skilled in the art would not be motivated to cool tissue below an initial tissue temperature, and thus would not combine Chou with another reference that teaches cooling tissue below an initial tissue temperature. Applicant respectfully requests that the rejections of Claims 1-4 over Chou in view of Anvari be withdrawn.

Rejection of Claims 1-20 under 35 U.S.C. § 103(a)

Claims 1-20 are rejected under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 6,413,268 to Hartman in view of Anvari. Applicants respectfully traverse these rejections because Hartman, either alone or in view of Anvari, fails to teach or suggest, either expressly or inherently, the elements of the claims.

Hartman does not teach or suggest an apparatus or method for applying a source of UV light including an intensity between about 16 and 20 MED or a cooler for cooling the diseased skin to below about 0 °C. Hartman teaches treatments with UV light *up to* 6 MED. Hartman at col. 8, l. 27 & col. 11, ll. 31-32. As described above, Anvari also does not teach or suggest an apparatus or method for applying a source of UV light including an intensity between about 16 and 20 MED or a cooler for cooling the diseased skin to below about 0 °C. By contrast, Claim 1 recites an apparatus comprising "a source of UV light including an intensity between about 16 and 20 minimum erythema doses (MED)" and "a cooler for cooling the diseased skin to below about 0 °C;" Claim 2 recites an apparatus comprising "a source of high intensity ultraviolet light between about 16 and 20 minimum erythema doses (MED)" and "a cooler included in said

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delivery device configured to cool the skin to lower than about 0 °C;” and Claim 4 recites a method comprising “cooling the diseased tissue to below about 0 °C and exposing the diseased tissue in said epidermal region to a dosage of ultraviolet light between about 16 and 20 minimum erythema doses (MED).” Therefore, Hartman, alone or in combination with Anvari, does not teach or suggest the elements of Claims 1, 2, and 4.

Claims 5-10 depend from Claim 1 and include the limitations recited in Claim 1 in combination with other limitations of particular utility. Hartman and Anvari therefore fail to disclose the combination of features recited in Claims 5-10. Claims 3 and 11-15 depend from Claim 2 and include the limitations recited in Claim 2 in combination with other limitations of particular utility. Hartman and Anvari therefore fail to disclose the combination of features recited in Claims 3 and 11-15. Claims 16-18 and 20 depend from Claim 4 and include the limitations recited in Claim 4 in combination with other limitations of particular utility. Hartman and Anvari therefore fail to disclose the combination of features recited in Claims 16-18 and 20. Accordingly, Applicant respectfully submits that Claims 1-18 and 20 are patentably distinct from Hartman and Anvari.

Moreover, Hartman does not report problems related to cooling at any dosage level that would cause one of skill in the art to look to another reference, such as Anvari, to solve such problems. Thus, based on the teaching of Hartman, one skilled in the art would not be motivated to cool tissue, and thus would not combine Hartman with another reference that teaches cooling tissue. Additionally, there is no motivation or suggestion to combine Hartman, which discloses a narrow band of UV light without a cooling system, with Anvari, which discloses a cooling system for use with infrared light. Applicant respectfully requests that the rejections of Claims 1-20 over Hartman in view of Anvari be withdrawn.

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CONCLUSION

Applicant has endeavored to address all of the Examiner's concerns as expressed in the outstanding Final Office Action. In light of the above remarks, reconsideration and withdrawal of the outstanding rejections is specifically requested. If the Examiner has any questions regarding the foregoing, the Examiner is invited to contact the undersigned at the phone number listed below.

Respectfully submitted,

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